PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Degertekin, et al.

Serial No.: 10/756,915

Filed: January 13, 2004

Confirmation No.: TBA

Group Art Unit: TBA

Examiner: TBA

Docket No.: 62020-1530

For: INTEGRATED MICRO FUEL PROCESSOR AND FLOW DELIVERY INFRASTRUCTURE

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This information disclosure statement is filed in accordance with 37 C.F.R. §§ 1.56, 1.97, and 1.98, and specifically:

☒ under 37 CFR 1.97(b), or
(within Three months of filing national application; or date of entry of international application; or before mailing date of first office action on the merits; whichever occurs last)

☐ under 37 CFR 1.97(c) together with either a:
- ☐ Statement Under 37 C.F.R. 1.97(e), or
- ☐ a $180.00 fee under 37 CFR 1.17(p), or

(After the CFR 1.97(b) time period, but before the final office action or notice of allowance, whichever occurs first)

☐ under 37 CFR 1.97(d) together with a:
- ☐ Statement under 37 CFR 1.97(e), and
- ☐ a $180.00 petition fee set forth in 37 CFR 1.17(p).

(Filed after final office action or notice of allowance, whichever occurs first, but before payment of the issue fee)

Enclosed is a check in the amount of $.

Enclosed is Credit Card Payment Form (PTO-2038) in the amount of $.

Please charge $ to deposit account . At any time during the pendency of this application, please charge any fees required to Deposit Account 20-0778 pursuant to 37 CFR 1.25. The Commissioner is hereby requested to credit any overpayment to Deposit Account No. 20-0778.

☒ Applicant(s) submit herewith *Form PTO 1449A - Information Disclosure Statement by Applicant* together with copies (where required) of patents, publications or other information of which applicant(s) are aware, which applicant(s) believe(s) may or may not be material to the examination of this application and for which there may be a duty to disclose in accordance with 37 CFR 1.56. As required by 37 C.F.R. §1.98(a), a legible copy of each document is provided.

☐ A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO Form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on the form PTO 1449 and is enclosed herewith.

The following rights are reserved by the Applicant(s): the right to establish the patentability of the claimed invention over any of the listed documents should they be applied as reference, and/or the right to prove that some of these documents may not be prior art, and/or the right to prove that some of these documents may not be enabling for the teachings they purport to offer.

This statement should not be construed as a representation that an exhaustive search has been made, or that information more material to the examination of the present application does not exist. Any statements or identifications regarding the relevance of any portion(s) of cited references should not be construed as a representation that the most relevant portion(s) have been identified, and the absence of such statements or identifications should not be construed as representations that there are no relevant portion(s). The Examiner is specifically requested not to rely solely on the materials submitted herewith. The Examiner is requested to conduct an independent and thorough review of the documents, and to form independent opinions as to their significance.

It is requested that the information disclosed herein be made of record in this application and that the Examiner initial and return a copy of the enclosed PTO-1449 to indicate the documents have been considered.

Respectfully Submitted,

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

By: _____

Christopher B. Linder, Reg. No. 47,751

100 Galleria Parkway, Suite 1750
Atlanta, Georgia 30339-5948
770-933-9500

CERTIFIED MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as **"First Class Mail,"** in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 17, 2004.

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Form PTO-1449

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Attorney Docket No.	Serial No.
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U.S. PATENT DOCUMENTS

Examiner Initials	Item	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	A	6,228,147	5/8/01	Takahashi	95	55	3/13/98
	B	6,474,786	11/5/02	Percin, et al.	347	54	2/22/01
	C	6,541,676	4/1/03	Franz, et al.	585	250	12/2/99

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No

OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, etc.)*

	D	Kikas, et al.; Hydrogen Production in a Reverse-Flow Autothermal Catalytic Microreactor: From Evidence of Performance Enhancement to Innovative Reactor Design; Ind. Eng. Chem. Res., Vol. 42, No. 25; pp. 6273-6279
	E	Kikas, et al.; Hydrogen Production in the Reverse-Flow Autothermal Catalytic Microreactor; 7th Int. Conference on Microreaction Technology; Switzerland, September 2003; pp 1-3
	F	Kikas; et al.; Feedstock for Micro Fuel Cells: Efficient Hydrogen Production in the Reverse-Flow Autothermal Catalytic Microreactors with Fractal Structuring of the Catalytically Active Surface; Int. Synposium on Micro/Nano Scale Energy Conversion, Turkey, April, 2002; 3 pages
	G	Meacham; et al.; A Micromachined Ultrasonic Droplet Generator Based on a Liquid Horn Structure; Review of Scientific Instruments (submitted on 09/25/03); pp 1-17
	H	Phillips, et al.; Catalyst Surface At a Fractal of Cost – A Quest for Optimal Catalyst Loading; Chemical Engineering Science, No. 58; 2003; pp 2403-2408
	I	Presentation to Prospective Sponsors; October, 2003
	J	Klavs F. Jensen; Microreaction Engineering-Is Small Better?: Chemical Engineering Science, No. 56; 2001; pp 293-3003
	K	Karnik, et al.; Towards a Palladium Micro-Membrane for the Water Gas Shift Reaction: Microfabrication Approach and Hydrogen Purification Results; Journal of Microelectromechanical Systems, Vol. 12, No. 1; February 2003; pp 93-100

* EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the applicant.

EXAMINER'S SIGNATURE:	DATE CONSIDERED:

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OTHER DOCUMENTS *(Including Author, Title, Date, Pertinent Pages, etc.)*

	L	Shu, et al.; Catalytic Palladium-Based Membrane Reactors: A Review; The Canadian Journal of Chemical Engineering, Vol. 69, October, 1991; pp 1036-1058
	M	Edwards, et al.; On-Board Hydrogen Generation For Transport Applications: the HotSpot™ Methanol Processor; Journal of Power Sources, No. 71; 1998; pp. 123-128
		Irving, et al.; Novel Catalytic Fuel Reforming with Advanced Membrane Technology; Proceedings of the 2001 DOE Hydrogen Program Review; NREL/CP-570-30535; 9 pages
	O	Han, et al.; Purifier-Integrated Methanol Reformer for Fuel Cell Vehicles; Journal of Power Sources, No. 86; 2000; pp 223-227
	P	Kothare, et al.; An Integrated Chemical Reforming Microplant for Fuel Cell Applications; Integrated Microchemical Systems Laboratory, Lehigh University; Presentation from NSF website in 2002; 14 pages
	Q	Quiram, et al.; Design Issues for Membrane-Based, Gas Phase Microchmical Systems; Chemical Engineering Sciences, No. 55; 2000, pp 3065-3075
	R	Hsing, et al.; Simulation of Micromachined Chemical Reactors for Heterogeneous Partial Oxidation Reactions; Chemical Engineering Science, No. 55; 2000; pp 3-13
	S	Tonkovich, et al.; Microchannel Reactors for Fuel Processing Applications. I. Water Gas Shift Reactor; Chemical Engineering Science, No. 54; 1999; pp. 2947-2951
	T	Fitzgerald, et al.; A Compact Steam Reforming Reactor For Use In An Automotive Fuel Processor; Proceedings of the Fourth International Conference on Microreaction Technology. 358-363. Atlanta, GA, 2000; pp 1-5
	U	Tonkovich; et al.; The Catalytic Partial Oxidation of Methane in a Microchannel Chemical Reactor; Proceedings of the Second International Conference of Microreaction Technology, March 1998, New Orleans, Louisiana; 11 pages
	V	Srinivasan, et al.; Chemical Performance and High Temperature Characterization of Micromachined Chemical Reactors; Transducers '97; 1997 International Conference on Solid-State Sensors and Actuators, Chicago, June 16-19, 1997; pp163-166
	W	Hsing, et al.; Simulation of Micromachined Chemical Reactors For Heterogeneous Partial Oxidation Reactions; Chemical Engineering Science, No. 55; 2000; pp 3-13
	X	Blanks, et al.; Bidirectional Adiabatic Synthesis Gas Generator; Chemical Engineering Science, Vol. 45, No. 8; 1990; pp 2407-2413
	Y	Ajmera, et al.; A Novel Cross-Flow Microreactor for Kinetic Studies of Catalytic Processes; Presented at the 5th International Microreactor Engineering and Technology Conference, May 2001; 10 pages

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	Z	Ben-Tullilah, et al.; Flow-Rate Effects in Flow-Reversal Reactors; Experiments, Simulations and Approximations; Chemical Engineering Science, Vol. 58; 2003; pp 1135-1146
	AA	Yurii Sh. Matros; Forced Unsteady-State Processes in Heterogeneous Catalytic Reactors; The Canadian Journal of Chemical Engineering, Vol. 74; October, 1996; pp 566-579
	BB	Arana, et al.; A Microfabricated Suspended-Tube Chemical Reactor for Thermally-Efficient Fuel Processing; REC. 07/09/2002; JMEMS, 0900; pp 1-31
	CC	Success in R&D of Optimal, Small-Scale, High-Performance Fuel Cells for Portable Devices; March 13, 2002; http://www.casio.com/corporate/pressroom.cfm?act=2&pr=553
	DD	Meacham, et al.; A Micromachined Ultrasonic Droplet Generator Based on a Liquid Horn Structure; Review of Scientific Instruments (Accepted); Submitted in Oct., 2003; pp 1-17
	EE	Yuan, et al.; MEMS-Based Piezoelectric Array Microjet; Microelectronic Engineering, No.; 66; 2003; pp 767-772
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	GG	Paul Calvert; Inkjet Printing for Materials and Devices; Chem. Mater., Vol. 13; 2001; pp 3299-3305
	HH	Calvert, et al.; Chemical Solid Free-Form Fabrication: Making Shapes Without Molds; Chm. Mater., Vol. 9; 1997; pp 650-663
	II	Chen, et al.; A New Method For Significantly Reducing Drop Radius Without Reducing Nozzle Radius in Drop-On-Demand Drop Production; Physics of Fluids, Vol. 14, No. 1; January, 2002; pp L1-L4
	JJ	Heij, et al.; Characterisation of a fL Droplet Generator For Inhalation Drug Therapy; Sensors and Actuators, Vol. 85; 2000; pp 430-434
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	LL	Percin, et al.; Micromachined Droplet Ejector Arrays; Review of Scientific Instruments, Vol. 73, No. 12; December, 2002; pp 4385-4389
	MM	Percin, et al.; Piezoelectrically Actuated Flextensional Micromachined Ultrasound Droplet Ejectors; IEEE Translations on Ultrasonics, Ferroelectrics, and Frequency Control, Vol. 49, No. 6; June, 2002; pp 756-766

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	NN	Percin, et al.; Piezoelectric Droplet Ejector For Ink-Jet Printing of Fluids and Solid Particles; Review of Scientific Instruments, Vol. 74, No. 2; February, 2003; pp 1120-1127
	OO	Ridley, et al.; All-Inorganic Field Effect Transistors Fabricated By Printing; SCIENCE, Vol. 286; October 22, 1999; pp 746-749
	PP	Tsai, et al.; The Role of Capillary Waves in Two-Fluid Atomization; Physc. Fluids, Vol. 9, (10); October, 1997; pp 2909-2918
	QQ	Hue P. Le; Progress and Trends in Ink-Jet Printing Technology; Journal of Imaging Science and Technology, Vol. 42, No. 1; January/February 1998; pp 49-62

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